

Express Mail No.: EL 477 035 956 US

#25
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE APR 26 2002

Application of: Harrington *et al.*

TECH CENTER 1600/2900

Application No.: 09/586,744

Group Art Unit: 1652

Filed: June 2, 2000

Examiner: T. Saidha

For: MAMMALIAN FLAP-SPECIFIC
ENDONUCLEASE

Attorney Docket No.: 9584-017

RESPONSE TO NOTICE TO COMPLY WITH SEQUENCE LISTING REQUIREMENTS

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to a Communication mailed February 21, 2002, Applicants submit herewith a Transmittal of Substitute Sequence Listing. Enclosed is a copy of the sequence listing and the listing in computer-readable form. Also, enclosed is a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) requesting a one month extension of the date for response to and including Monday, April 22, 2002, along with provision for payment of the appropriate fee.

Respectfully submitted,

RJ: [Signature] 47,167
Scott Warren Reg No.

Date April 22, 2002

[Signature]

Samuel B. Abrams

30,605

(Reg. No.)

PENNIE & EDMONDS LLP
1155 Avenue of the Americas
New York, New York 10036-2711
(212) 790-9090

Enclosures



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.

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APR 26 2002
TECH CENTER 1600/2900

EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED:

Please find below a communication from the EXAMINER in charge of this application

Commissioner of Patents

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures.

Any inquiry concerning this communication should be directed to Examiner Tekchand Saidha, Art Unit 1652, whose telephone number is (703)305-6595.

An inquiry of a general nature or relating to the status of the application should be directed to the group receptionist whose telephone number is (703)308-0196.

APPLICANT IS GIVEN ONE MONTH FROM THE DATE OF THIS LETTER WITHIN WHICH TO COMPLY WITH THE SEQUENCE RULES, 37 CFR 1.821 - 1.825. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 CFR 1.821(g). Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136. In no case may an applicant extend the period for reply beyond the six month statutory period. Applicant is requested to return a copy of the attached Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures with the response.

Tekchand Saidha
Tekchand Saidha 2/20/02
Patent Examiner (Primary)

**NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING
NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES**

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

- ☒ 1. This application clearly falls to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990 and at 55 FR 18230, May 1, 1990.
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- ☒ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- ☐ 7. Other: Applicant should follow the format of the attached sample statement to request that the CRF filed in the parent application be used to create a CRF in this application.

Applicant Must Provide:

- ☒ An Initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- ☒ An Initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.
- ☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216

For CRF Submission Help, call (703) 308-4212

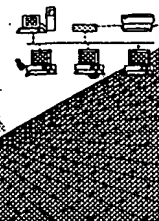
For PatentIn software help, call (703) 308-6856

PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR RESPONSE

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Saidha

BIOTECHNOLOGY
SYSTEMS
BRANCH



#28
L.P.

RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/586,744 B
Source: 1600
Date Processed by STIC: 2/1/2002

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TECH CENTER 1600/2900

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER** **VERSION 3.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

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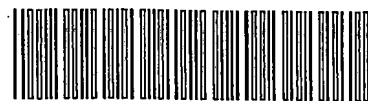
Raw Sequence Listing Error Summary

ERROR DETECTED SUGGESTED CORRECTIONSERIAL NUMBER: 09/586,744B

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleics The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
 Wrapped Aminos
- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 Misaligned Amino The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers;
 Numbering use space characters, instead.
- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 PatentIn 2.0 A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid
 "bug" sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 Skipped Sequences Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
 (OLD RULES) (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 This sequence is intentionally skipped

 Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 Skipped Sequences Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence.
 (NEW RULES) <210> sequence id number
 <400> sequence id number
 000
- 9 Use of n's or Xaa's Use of n's and/or Xaa's have been detected in the Sequence Listing.
 (NEW RULES) Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
 In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 Invalid <213> Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or
 Response scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 Use of <220> Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses.
 Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
 (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 PatentIn 2.0 Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file,
 "bug" resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.



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RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/586,744B

DATE: 02/01/2002
 TIME: 08:56:52

TECH CENTER 1600/2900

Input Set : A:\9584-017.txt

Output Set: N:\CRF3\02012002\I586744B.raw

Does Not Comply
 Corrected Diskette Needed

3 <110> APPLICANT: Harrington, et al.
 5 <120> TITLE OF INVENTION: Mammalian Flap Specific-Endonuclease
 7 <130> FILE REFERENCE: 9584-017
 9 <140> CURRENT APPLICATION NUMBER: 09/586,744B
 10 <141> CURRENT FILING DATE: 2000-06-02
 12 <160> NUMBER OF SEQ ID NOS: 74
 14 <170> SOFTWARE: PatentIn version 3.0
 16 <210> SEQ ID NO: 1
 17 <211> LENGTH: 380
 18 <212> TYPE: PRT
 19 <213> ORGANISM: Artificial
 21 <220> FEATURE:
 22 <223> OTHER INFORMATION: Peptide
 24 <400> SEQUENCE: 1
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 27 1 5 10 15
 29 Ala Ile Arg Glu Asn Asp Ile Lys Ser Tyr Phe Gly Arg Lys Val Ala
 30 20 25 30
 32 Ile Asp Ala Ser Met Ser Ile Tyr Gln Phe Leu Ile Ala Val Arg Gln
 33 35 40 45
 35 Gly Gly Asp Val Leu Gln Asn Glu Glu Gly Glu Thr Thr Ser His Leu
 36 50 55 60
 38 Met Gly Met Phe Tyr Arg Thr Ile Arg Met Met Glu Asn Gly Ile Lys
 39 65 70 75 80
 41 Pro Val Tyr Val Phe Asp Gly Lys Pro Pro Gln Leu Lys Ser Gly Glu
 42 85 90 95
 44 Leu Ala Lys Arg Ser Glu Arg Arg Ala Glu Ala Glu Lys Gln Leu Gln
 45 100 105 110
 47 Gln Ala Gln Ala Ala Gly Ala Glu Gly Glu Val Glu Lys Phe Thr Lys
 48 115 120 125
 50 Arg Leu Val Lys Val Thr Lys Gln His Asn Asp Glu Cys Lys His Leu
 51 130 135 140
 53 Leu Ser Leu Met Gly Ile Pro Tyr Leu Asp Ala Pro Ser Glu Ala Glu
 54 145 150 155 160
 56 Ala Ser Cys Ala Ala Leu Val Lys Ala Gly Lys Val Tyr Ala Ala Ala
 57 165 170 175
 59 Thr Glu Asp Met Asp Cys Leu Thr Phe Gly Ser Pro Val Leu Met Arg
 60 180 185 190
 62 His Leu Thr Ala Ser Glu Ala Lys Lys Leu Pro Ile Gln Glu Phe His
 63 195 200 205
 65 Leu Ser Arg Ile Leu Gln Glu Leu Gly Leu Asn Gln Glu Gln Phe Val
 66 210 215 220
 68 Asp Leu Cys Ile Leu Leu Gly Ser Asp Tyr Cys Glu Ser Ile Arg Gly

The type of errors shown exist throughout
 the Sequence Listing. Please check subsequent
 sequences for similar errors.

- need to explain source
 of genetic material on line
 <223>. See item # 11 on
 error summary sheet.

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/586,744B

DATE: 02/01/2002

TIME: 08:56:52

Input Set : A:\9584-017.txt

Output Set: N:\CRF3\02012002\I586744B.raw

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69 225          230          235          240
71 Ile Gly Pro Lys Arg Ala Val Asp Leu Ile Gln Lys His Lys Ser Ile
72          245          250          255
74 Glu Glu Ile Val Arg Arg Leu Asp Pro Asn Lys Tyr Pro Val Pro Glu
75          260          265          270
77 Asn Trp Leu His Lys Glu Ala His Gln Leu Phe Leu Glu Pro Glu Val
78          275          280          285
80 Leu Asp Pro Glu Ser Val Glu Leu Lys Trp Ser Glu Pro Asn Glu Glu
81          290          295          300
83 Glu Leu Ile Lys Phe Met Cys Gly Glu Lys Gln Phe Ser Glu Glu Arg
84 305          310          315          320
86 Ile Arg Ser Gly Val Lys Arg Leu Ser Lys Ser Arg Gln Gly Ser Thr
87          325          330          335
89 Gln Gly Arg Leu Asp Asp Phe Phe Lys Val Thr Gly Ser Leu Ser Ser
90          340          345          350
92 Ala Lys Arg Lys Glu Pro Glu Pro Lys Gly Ser Thr Lys Lys Lys Ala
93          355          360          365
95 Lys Thr Gly Ala Ala Gly Lys Phe Lys Arg Gly Lys
96          370          375          380

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98 <210> SEQ ID NO: 2

99 <211> LENGTH: 1144

100 <212> TYPE: DNA

101 <213> ORGANISM: Artificial

103 <220> FEATURE:

104 <223> OTHER INFORMATION: cDNA

106 <400> SEQUENCE: 2

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109aatgacatca agagctactt tggccgtaag gtggccattg atgcctctat gagcatttat 120
111cagttcctga ttgctgttcg ccagggtggg gatgtgctgc agaatgagga ggggtgagacc 180
113accagccacc tgatgggcat gttctaccgc accattcgca tgatggagaa cggcatcaag 240
115cccggtgatg tctttgatgg caagccgcca cagctcaagt caggcgagct ggccaaacgc 300
117agtgagcggc gggctgaggc agagaagcag ctgcagcagg ctcaggctgc tggggccgag 360
119caggaggtgg aaaaattcac taagcggtct gtgaaggcca ctaagcagca caatgatgag 420
121tgcaaacatc tgctgagcct catgggcatc ccttatcttg atgcacccag tgaggcagag 480
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127aagctgccaa tccaggaatt ccacctgagc cggattctgc aggagctggg cctgaaccag 660
129gaacagtttg tggatctgtg catcctgcta ggcagtgact actgtgagag tatccggggg 720
131attgggcccc agcgggctgt ggacctcatc cagaagcaca agagcatcga ggagatcgtg 780
133cggcgacttg accccaacaa gtaccctgtg ccagaaaatt ggctccacaa ggaggctcac 840
135cagctcttct tggaacctga ggtgctggac ccagagtctg tggagctgaa gtggagcgag 900
137ccaaatgaag aagagctgat caagttcatg tgtggtgaaa agcagttctc tgaggagcga 960
139atccgcagtg gggtaagag gctgagtaag agccgccaa ggcagaccca gggccgcctg 1020
141gatgatttct tcaaggtgac cggctcactc tcttcagcta agcgcaagga gccagaacct 1080
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145taaa

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148 <210> SEQ ID NO: 3

149 <211> LENGTH: 377

150 <212> TYPE: PRT

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/586,744B

DATE: 02/01/2002

TIME: 08:56:52

Input Set : A:\9584-017.txt

Output Set: N:\CRF3\02012002\I586744B.raw

--> 151 <213> ORGANISM: Artificial

153 <220> FEATURE:

154 <223> OTHER INFORMATION: Peptide

156 <400> SEQUENCE: 3

See page 1

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159	1				5				10					15		
161	Ala	Ile	Arg	Glu	Asn	Asp	Ile	Lys	Ser	Tyr	Phe	Gly	Arg	Lys	Val	Ala
162				20					25					30		
164	Ile	Asp	Ala	Ser	Met	Ser	Ile	Tyr	Gln	Phe	Leu	Ile	Ala	Val	Arg	Gln
165			35					40					45			
167	Gly	Gly	Asp	Val	Leu	Gln	Asn	Glu	Glu	Gly	Glu	Thr	Thr	Ser	Leu	Met
168		50					55					60				
170	Gly	Met	Phe	Tyr	Arg	Thr	Ile	Arg	Met	Glu	Asn	Gly	Ile	Lys	Pro	Val
171	65					70					75				80	
173	Tyr	Val	Phe	Asp	Gly	Lys	Pro	Pro	Gln	Leu	Lys	Ser	Gly	Glu	Leu	Ala
174				85					90					95		
176	Lys	Arg	Ser	Glu	Arg	Arg	Ala	Glu	Ala	Glu	Lys	Gln	Leu	Gln	Gln	Ala
177				100					105					110		
179	Gln	Glu	Ala	Gly	Met	Glu	Glu	Val	Glu	Lys	Phe	Thr	Lys	Arg	Leu	Val
180			115					120					125			
182	Lys	Val	Thr	Lys	Gln	His	Asn	Asp	Glu	Cys	Lys	His	Leu	Leu	Ser	Leu
183		130					135					140				
185	Met	Gly	Ile	Pro	Tyr	Leu	Asp	Ala	Pro	Ser	Glu	Ala	Glu	Ala	Ser	Cys
186	145					150				155					160	
188	Ala	Ala	Leu	Ala	Lys	Ala	Gly	Lys	Val	Tyr	Ala	Ala	Ala	Thr	Glu	Asp
189				165						170					175	
191	Met	Asp	Cys	Leu	Thr	Phe	Gly	Ser	Pro	Val	Leu	Met	Arg	His	Leu	Thr
192				180					185					190		
194	Ala	Ser	Glu	Ala	Lys	Lys	Leu	Pro	Ile	Gln	Glu	Phe	His	Leu	Ser	Arg
195			195					200					205			
197	Val	Leu	Gln	Glu	Leu	Gly	Leu	Asn	Gln	Glu	Gln	Phe	Val	Asp	Leu	Cys
198		210					215					220				
200	Ile	Leu	Leu	Gly	Ser	Asp	Tyr	Cys	Glu	Ser	Ile	Arg	Gly	Ile	Gly	Ala
201	225					230					235				240	
203	Lys	Arg	Ala	Val	Asp	Leu	Ile	Gln	Lys	His	Lys	Ser	Ile	Glu	Glu	Ile
204				245						250					255	
206	Val	Arg	Arg	Leu	Asp	Pro	Ser	Lys	Tyr	Pro	Val	Pro	Glu	Asn	Trp	Leu
207				260					265					270		
209	His	Lys	Glu	Ala	Gln	Gln	Leu	Phe	Leu	Glu	Pro	Glu	Val	Val	Asp	Pro
210			275					280					285			
212	Glu	Ser	Val	Glu	Leu	Lys	Trp	Ser	Glu	Pro	Asn	Glu	Glu	Glu	Leu	Val
213		290					295					300				
215	Lys	Phe	Met	Cys	Gly	Glu	Lys	Gln	Phe	Ser	Glu	Glu	Arg	Ile	Arg	Ser
216	305					310					315				320	
218	Gly	Val	Lys	Arg	Leu	Ser	Lys	Ser	Arg	Gln	Gly	Ser	Thr	Gln	Gly	Arg
219				325					330					335		
221	Leu	Asp	Asp	Phe	Phe	Lys	Val	Thr	Gly	Ser	Leu	Ser	Ser	Ala	Lys	Arg
222				340					345					350		
224	Lys	Glu	Pro	Glu	Pro	Lys	Gly	Ser	Ala	Lys	Lys	Lys	Ala	Lys	Thr	Gly

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/586,744B

DATE: 02/01/2002

TIME: 08:56:52

Input Set : A:\9584-017.txt

Output Set: N:\CRF3\02012002\I586744B.raw

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225          355          360          365
227 Gly Ala Gly Lys Phe Arg Arg Gly Lys
228          370          375
230 <210> SEQ ID NO: 4
231 <211> LENGTH: 1930
232 <212> TYPE: DNA
--> 233 <213> ORGANISM: Artificial
235 <220> FEATURE:
236 <223> OTHER INFORMATION: CDNA - see page 1
238 <400> SEQUENCE: 4
239 atgggaattc acggccttgc caaactaatt gctgatgtgg cccccagtgc catccgtgag 60
241 aatgacatca agagctactt tggctgtaaa gtggccatcg atgectccat gagcatctac 120
243 cagttcctga ttgctgttcg tcaggggtgg gatgtgctgc agaacgagga gggtagagacc 180
245 accagcctga tgggcatgtt atggcaaacc atccgcatgg agaatggcat caagcctgtg 240
247 tacgtctttg atggcaaacc accacagctg aagtcaggcg agctggccaa gcgcagttag 300
249 aggcgcgcgc aggttgagaa gcaactgcag caggctcagg aggttgggat ggaggaggag 360
251 gtggagaagt tcaccaagag gctcgtgaag gtcaccaagc aacacaatga tgagtgc aaa 420
253 caccctcgtga gcctcatggg catcccttac cttgatgcac ccagcgaggc agaggccagc 480
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263 gccaaagcgg ctgtggatct catccagaaa cataagagca tcgaggagat cgtgaggcgg 780
265 ctggacccca gcaagtaccc cgttccagag aactggctcc acaaggaagc ccagcagctc 840
267 ttcctggagc cagaagtagt ggacccagag tctgtggagc tgaagtggag cgagccaaat 900
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273 ttcttcaagg tgacaggctc actctcctca gctaagcgca aggagccaga acccaagggg 1080
275 cctgctaaga agaaagcaaa gactggggga gcgggggaagt tccgaagggg aaaataaacc 1140
277 tgtccttccc ctccactgtc cttgacccca ggctgtctat ctgttttgta ccctgcgctg 1200
279 cagcacatcc ctcttgtccc tcgtcttgag gagagttcat tgcttccagc gctcgccttc 1260
281 agagctttcc ctctcttgac cctgtggcag gaaggccgta gctctgcttt ttctcatttt 1320
283 tagctcagga aagatgtcag gctcaaacca cttctcaggt taatggacac tgtagtcatt 1380
285 gttctgtgca actgcgagca atgtcttaag gaagaagaag ataaagccgg gagcgaggct 1440
287 ggagatagtt tcccagctgg ccagctggtg gaggagaggt gactagaacc tgactgacta 1500
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297 tccagtgttg gggattgacc ccagggcaaa ggcattaagt gtgccactga cctgtgcctc 1800
299 caagtgatgt tctgacagcc tttctgaggc aatcaattga attgaggttt tgggagaaga 1860
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RAW SEQUENCE LISTING

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Output Set: N:\CRF3\02012002\I586744B.raw

314 <400> SEQUENCE: 5

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320 20 25 30
322 Ile Asp Ala Ser Met Ser Leu Tyr Gln Phe Leu Ile Ala Val Arg Gln
323 35 40 45
325 Gln Asp Gly Gly Gln Leu Thr Asn Glu Ala Gly Glu Thr Thr Ser His
326 50 55 60
328 Leu Met Gly Met Phe Tyr Arg Thr Leu Arg Met Ile Asp Asn Gly Ile
329 65 70 75 80
331 Lys Pro Cys Tyr Val Phe Asp Gly Lys Pro Pro Asp Leu Lys Ser His
332 85 90 95
334 Glu Leu Thr Lys Arg Ser Ser Arg Arg Val Glu Thr Glu Lys Lys Leu
335 100 105 110
337 Ala Glu Ala Thr Thr Glu Leu Glu Lys Met Lys Gln Glu Arg Arg Leu
338 115 120 125
340 Val Lys Val Ser Lys Glu His Asn Glu Glu Ala Gln Lys Leu Leu Gly
341 130 135 140
343 Leu Met Gly Ile Pro Tyr Ile Ile Ala Pro Thr Glu Ala Glu Ala Gln
344 145 150 155 160
346 Cys Ala Glu Leu Ala Lys Lys Gly Lys Val Tyr Ala Ala Ala Ser Glu
347 165 170 175
349 Asp Met Asp Thr Leu Cys Tyr Arg Thr Pro Phe Leu Leu Arg His Leu
350 180 185 190
352 Thr Phe Ser Glu Ala Lys Lys Glu Pro Ile His Glu Ile Asp Thr Glu
353 195 200 205
355 Leu Val Leu Arg Gly Leu Asp Leu Thr Ile Glu Gln Phe Val Asp Leu
356 210 215 220
358 Cys Ile Met Leu Gly Cys Asp Tyr Cys Glu Ser Ile Arg Gly Val Gly
359 225 230 235 240
361 Pro Val Thr Ala Leu Lys Leu Ile Lys Thr His Gly Ser Ile Glu Lys
362 245 250 255
364 Ile Val Glu Phe Ile Glu Ser Gly Glu Ser Asn Asn Thr Lys Trp Lys
365 260 265 270
367 Ile Pro Glu Asp Trp Pro Tyr Lys Gln Ala Arg Met Leu Phe Leu Asp
368 275 280 285
370 Pro Glu Val Ile Asp Gly Asn Glu Ile Asn Leu Lys Trp Ser Pro Pro
371 290 295 300
373 Lys Glu Lys Glu Leu Ile Glu Tyr Leu Cys Asp Asp Lys Lys Phe Ser
374 305 310 315 320
376 Glu Glu Arg Val Lys Ser Gly Ile Ser Arg Leu Lys Lys Gly Leu Lys
377 325 330 335
379 Ser Gly Ile Gln Gly Arg Leu Asp Gly Phe Phe Gln Val Val Pro Lys
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383 355 360 365
385 Lys Leu Asn Lys Asn Lys Asn Lys Val Thr Lys Gly Arg Arg
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VERIFICATION SUMMARY

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Input Set : A:\9584-017.txt

Output Set: N:\CRF3\02012002\I586744B.raw

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